TYPE B ASPHALT CONCRETE

GENERAL

Type B Asphalt Concrete base, binder, leveling, strengthening, and surface course mixtures are composed of gravel, crushed stone or combinations of gravel, stone and sand produced from approved sources and formulated to provide service for roads carrying low to moderate traffic. The formulation procedure results in a job mix formula for each aggregate combination together with a recommended percentage of asphalt cement. Class 2 mixtures can often be produced utilizing a single processed aggregate, such as pit run gravel because crushed particles are not specifically required. Class 1 and surface course mixes requirements include a minimum crushed particle percentage and additional controls.

Type B asphalt Concrete may be placed as base, binder, or surface course depending upon mix class and size. Class 2 mixtures may be placed full depth on virtually any roadway except those subjected to heavy traffic volumes. Class 1 mixtures may also be placed full depth; both classes of mix are commonly placed as upper base or surface on Bituminous Treated Aggregate Base courses. Type B Base specifications are employed on the secondary road system and by special designs on the primary road system. The Type B Surface specifications apply on primary projects unless otherwise provided. Because several options are available, care must be exercised in selecting the mix class, lift thickness, and mix size during the various stages of design and construction so that the appropriate requirements are met.

JOB MIX FORMULA

Job mix formulae are required by the specifications for all aggregate combinations. In each case, representative samples are to be obtained as directed by the District Materials Engineer and submitted to the Central Laboratory for analysis. A job mix formula will be set for each aggregate combination on the basis of gradation, stability, asphalt content and voids. The design criteria developed from laboratory studies and performance evaluations apply specifically to wearing courses; limiting values for the various characteristics for each mixture as actually produced are provided in Materials I.M. 511. The formulae are comprised of the aggregate percentages, percent asphalt, and gradation as limited by specification requirements. In the event satisfactory job mix formulae cannot be set within the limitations imposed by the specifications, they may be set by extra work order with the advance approval of the Construction Engineer. Formulae set in this manner may be outside of the standard limits and may incorporate material percentages or material types other than specified. Adjustments in contract price may be required depending upon the type of changes ordered.

SPECIAL REQUIREMENTS

The Standard Specifications for Type B aggregates and mixes permit usage of a broad range of aggregates and formulations. These requirements will provide the design level of service, light to moderate traffic, under average service conditions, although some aggregates or aggregate combinations may not exhibit satisfactory performance when incorporated in surface courses. Problems of this type will vary across the state and are to be monitored by the District Materials Engineer. Special specifications will be prepared by the Central Office Materials staff on request or by recommendation by the District for specific projects. In some cases Special Provisions will be initiated by the Central Office staff for projects that will be subjected to unusual service conditions or contain special designs.

INSPECTION

Plant calibration and inspection procedures are provided in Materials I.M. 508 and I.M. 509. Sampling and testing requirements are contained in Materials I.M. 204 and I.M. series 300. Additional information and instructions are provided by the Office of Construction.

It should be noted that the specifications may provide for separate measurement for payment of the asphalt cement. The tonnage of asphalt cement is not deducted from the tonnage of mixture incorporated and accepted in the work.